

FY 2011 ENERGY AND WATER APPROPRIATIONS
REQUESTED PROJECTS
HONORABLE SOLOMON P. ORTIZ
TX-27

(alphabetical order by project name)

Project Name: Brazos Island Harbor, TX
Recipient: Brownsville Navigation District
1000 Foust Road
Brownsville, Texas 78512

\$13,000,000 in federal funding is requested for Brownsville O&M dredging project and Jetty Repair that is an unfunded FY11 need. The Brownsville Ship Channel is maintained by the U.S. Army Corps of Engineers. All O&M funding could be used in the next year. The Port of Brownsville is a major center of industrial development with over 250 companies doing business representing some 8,000 jobs to the surrounding area. .

The Port of Brownsville is truly the economic engine for South Texas. It represents the promise of the economic viability of the region which has been economically depressed for many years. With the implementation of NAFTA, the Port has seen steady growth for years. The Port expects this tremendous growth to continue and will need the infrastructure to keep up with demand. This expansion process starts with this feasibility study request.

Project Name: Brazos Island Harbor, Brownsville Channel, TX
Recipient: Brownsville Navigation District
1000 Foust Road
Brownsville, Texas 78512

\$600,000 in federal funding is requested for this project. The Port of Brownsville is truly the economic engine for South Texas. It represents the promise of the economic viability for the region which has been economically depressed for many years. With the implementation of NAFTA, the Port has seen steady growth for years. The Port expects this tremendous growth to continue and will need the infrastructure to keep up with demand. This expansion process starts with this feasibility study request.

Project Name: Brownsville Resaca Restoration Project
Recipient: Brownsville Public Utilities Board
1425 Robinhood Drive
P.O. Box 3270
Brownsville, TX 78523-3270

The requested funding level of \$1,900,000 in federal funding will allow completion of the Feasibility Study for the Resaca Restoration Project. Resacas are typically filled by pumping Rio Grande water, rainfall, or input of irrigation return flows. They serve as reservoirs and conveyance channels for transportation of water from the Rio Grande: the water is used for drinking water and for irrigation by agricultural and residential users. Rainfall runoff carries a large amount of suspended solids that quickly settle out in the low flow resacas. The condition has created a shallow water environment throughout the resacas, and the condition of the resacas is deteriorating.

Project Name: Coastal Texas Ecosystem Protection and Restoration Program
Recipient: Texas General Land Office
P.O. Box 12873
Austin, TX 78711

\$800,000 in federal funding is requested for this project. The purpose of the Coastal Texas Ecosystem Protection and Restoration Program is to reduce coastal erosion, improve the maintenance of navigation channels, better use dredged material as a resource, assess ecological resources, prepare one or more sediment budgets and plans to manage sediment, develop plans or proposals for the sustainability of coastal communities, assess the impact, if any, of sea level rise on coastal resources, and, in general, prepare plans and projects that will promote responsible coastal stewardship in the State of Texas.

Project Name: Corpus Christi Ship Channel, TX (La Quinta Extension)
Recipient: Port of Corpus Christi
P. O. Box 1541
Corpus Christi, TX 78403

\$50,000,000 in federal cost share funding is requested for this project. The Channel Improvement Project will reduce ship transportation costs by providing a more efficient channel system to import and export cargo. Annual benefits are projected to be over \$40 million per year over the next 50 years for the entire Corpus Christi Ship Channel System including over \$9 million per year of ocean-going and landside transportation cost savings, in particular, for extending the La Quinta Ship Channel. Extending the La Quinta Channel to the proposed multi-purpose and container terminal is integral to strengthen and diversify the regional economy. The channel extension and terminal's construction and operation will create several hundred jobs and economic recovery to a severely economically distressed region due to Naval Station Ingleside's BRAC closure. The terminal's initial phase creates 2500 highly skilled and high-wage jobs providing relief to the 7,000 jobs affected by the base closure. Ultimately, the terminal will spur additional industrial development and generate demand for housing, retail and commercial businesses generating 8,217 direct jobs, \$321 million in direct personal income, and \$70 million in State and Local taxes. In addition, a feature of the project includes the construction of an environmental beneficial use site creating 200 acres of shallow water habitat for seagrass development.

Project Name: Cuates Transmission Main Rehabilitation and Pump Station
Recipient: Laguna Madre Water District
105 Port Road
Port Isabel, TX 78578

\$15,674,023 in federal cost share funding is requested for this project. For the primary project, the Cuates Transmission Main, the pipeline is being increased in size which results in a reduction of head loss resulting from the pressure required to deliver raw water from the Cuates pump station. Using year 2025 average day raw water demand of 7.5 MGD, the difference between the existing pipeline and proposed pipeline is approximately 240 kilowatts per hour. In other words, the proposed pipeline will save approximately 240 kilowatts per hour of operation. At raw water demand of 15 MGD, the maximum day flow for 2025, this project is a valuable use of taxpayer funds because the realized savings would be approximately 1815 kilowatts per hour of operation. For the additional project, Cuates Pump Station Rehabilitation, new bowls and motors will be used to replace the existing aged pump and motor components. Assuming current bowl and motor efficiencies of 0.5 and 0.75 respectively, the operating power cost to pump flow of 10 MGD (which equates to the average annual demand in 2020) is \$ 30,470 per year. By replacing existing bowls and motors with high efficiency bowls and motors, this project is a valuable use of taxpayer funds because a 55.4% savings on power cost may be realized for equivalent water delivery to the plants.

Project Name: Dredge Disposal Capacity Increase
Recipient: Brownsville Navigation District
1000 Foust Road
Brownsville, Texas 78512

\$10,000,000 in federal funding is requested for this project. Maintaining authorized depths of Brownsville Ship Channel necessary for navigation of ocean going vessels and the viability of the Port. The Port of Brownsville is a major center of industrial development with over 250 companies doing business representing some 8,000 jobs to the surrounding area. The Port has authorized depths 44 feet at its entrance from the Gulf of Mexico, then 42 feet up to and including the turning basin extension, decreasing to 36 feet at the turning basin. In order to maintain the navigation of the ship channel at its authorized depths, there must be sufficient capacity to dispose of the dredge material.

Project Name: Lower Rio Grande Resources Conservation Program
Recipient: Lower Rio Grande Valley Water District Managers' Association
P.O. Box 6
San Juan, TX 78589

\$10,000,000 in total project cost is requested for this project. Federal funds are appropriate for this authorized program since the original projects were constructed 100 years ago by local government, later some improvements were made with federal assistance in the 1950's, but

maintenance has fallen far behind. All project plans were prepared to federal standards. The Bureau of Reclamation (BOR) has allowed the districts to borrow money to complete projects with the understanding the BOR will reimburse the water districts when federal appropriations are made available. Providing the \$10 million will permit the BOR to “catch up” on its obligations, repay the local farmers and allow additional new work to create construction jobs and water savings. The federal government has failed to get Mexico to meet its water release quotas into the Rio Grande, thus these projects are a necessity to conserve the available water and protect the local municipal water use and agricultural production efforts from the next drought.

Project Name: Nueces River and Tributaries
Recipient: Texas A&M University-Corpus Christi
6300 Ocean Drive
Corpus Christi, TX 78412

\$600,000 in federal cost share funding is requested for this project. Currently about 4,000,000 people live in South Texas and regional aquifers and rivers supply all their water. Managing water resources in the face of a changing population, land use, and climate has proven to be a difficult challenge, especially when factoring in the need to provide sufficient water to meet not only human but environmental needs as well. Existing water projects have taken a toll on the coastal ecosystem, and efforts to restore the Nueces estuary have been underway since 1995 when it was discovered that environmental flows were reduced by more than 90% from 1983-1993, which resulted in severe degradation of the Nueces Delta marsh.

Texas A&M University-Corpus Christi seeks funding to create a watershed basin, groundwater, and bay assessment program to provide the basis for decision making on water management and environmental restoration for the Nueces watershed. The goal is to create an integrated watershed management plan using input from stakeholders, engineers, and ecologists to develop water budgets, control water quality, and enhance coastal ecosystem restoration programs. The project would deploy a series of instruments to collect real-time data on water cycle components within the Nueces watershed and Nueces River, and integrate this new basin-level information with existing instruments in Nueces and Corpus Christi Bays. The real-time data will be made useful by linking it to models which forecast future events, and making the data and forecasts available on map-based web services.

Project Name: Raw Water 36-inch Line
Recipient: Laguna Madre Water District
105 Port Road
Port Isabel, TX 78578

\$8,954,000 in federal cost share funding is requested for this project. The Laguna Madre Water District (LMWD) has a responsibility to its service area to provide regulatory compliant water quality and guarantee safe and reliable retail water service year-round. The LMWD's raw water

system is in relatively good shape. However, in mid year 2009-rehabilitation or replacement of the existing 48,963 linear feet of 36-inch diameter raw water pipeline, needed to reduce accelerating recent rate offailures (10 to date, 4 in last year). This project is a valuable use of taxpayer funds because it will eliminate the cost of future failures, and it will also prevent risks to customers. In addition, it will enhance conveyance and pressure capabilities.

Project Name: Raymondville Drain Outfall Project
Recipient: Hidalgo County Drainage District #1
902 N. Doolittle
Edinburg, TX 78541

\$1,000,000 in federal funding is requested for this project. The Raymondville Drain Outfall Project is intended to provide flood protection and drainage to a watershed area of approximately 322 square miles, including the City of Raymondville and surrounding rural and agricultural areas of Hidalgo, Willacy, and Cameron Counties. The purpose of this project is to formulate and design a flood control plan to divert floodwater from North Main Drain to Raymondville Drain to reduce the existing flooding problems within the urbanized areas. The Raymondville Drain will play an important role in the flood protection of over 1 million residents in Hidalgo, Willacy, and Cameron Counties from future storm events and will allow for the continued and future economic development and growth along already-developed and potentially flood-prone areas in Hidalgo, Willacy, and Cameron Counties. This investment reduces the probability of flooding in case of hurricane and unexpected flash floods from heavy rains. The FY11 request will provide the Corps funding to review HCDD No. 1's portion of the work on the project. Currently the USACE does not have funding in their budget to provide for someone to review HCDD No. 1's plans.

Project Name: Regional Sediment Management
Continuing Authorities Program: Beneficial Use of Dredged Material
(Section 204): South Padre Island, TX (Regional Sediment Management)
Recipient: South Padre Island, City of
4501 Padre Boulevard
South Padre Island, TX 78597

\$500,000 in federal cost share funding is requested for this Section 933/204 Feasibility Study project. The City of South Padre Island is located at the southernmost tip of Texas near the border of Mexico, on a barrier island that extends the entire length of the coast of Texas. The erosion rates along this barrier island vary considerably based upon wind, currents, and proximity to rivers and other sediment carrying locations. Specifically within the City of South Padre Island, the shoreline change rates vary from historic accretion at a rate of 8 ft per year to erosion at a rate of 9 feet per year. The beaches of South Padre Island are critical economic and environmental assets as they host approximately 22,074 visitors and inhabitants daily, are estimated to generate \$64 million dollars in total retail sales, result in the creation of about 3171 jobs, and generate annual property tax revenues of over \$4.56 million. In addition, the City of South Padre Island comprises 76% of the Point Isabel School District's tax base; 73% of the

Laguna Madre Water District's tax base; 22% of Texas Southmost College (UTB) tax base; and 16% of Cameron County tax base. Should the shoreline continue to deteriorate to the extent that our land values are affected to any degree, the economic impact could be devastating not only our local economy, but also the region.

Project Name: Renovation of Surface Water Treatment Plant
Recipient: City of Rio Hondo
P.O. Box 389
Rio Hondo, TX 78583

\$1,000,000 in federal cost share funding is requested for this project. This project is not only valuable use of taxpayer funds, it is vital for The City of Rio Hondo due to constant failure of aging equipment existing at the water treatment plant. This is the only source of drinking water for the entire population of 2,000 plus with majority of low and moderate income.

Project Name: Rio Grande Renewable Energy Research and Commercialization Center (RGREC)
Recipient: The University of Texas at Brownsville
80 Fort Brown
Brownsville, Texas 78520

\$2,572,823 in federal cost share funding is requested for this project. UTB/TSC is creating a renewable energy research center (RGREC) which generates community benefit and sustainable revenues from five activities: (1) the design & engineering of the specifications for solar and wind power generation facilities, (2) applications/problem solving research in direct collaboration with industry, (3) certification of energy outputs and efficiency of existing systems, (4) training and certification of renewable energy technicians to international standards, and (5) commercialization of innovative intellectual property.

The collaboration between UTB/TSC researchers, industry partners and the National Energy Laboratory of Spain (CENER) creates synergies and brings the RGREC immediate access to world class scientists working in all areas of renewable energy. The RGREC will provide a mechanism for technology transfer and applications research for the U.S. in the fields of solar photo-voltaics, solar thermal, wind energy, bio-mass fuels, bioclimatic architecture and renewable energy grid integration. In addition, methods of conducting certification training of technicians and the certification of installed systems to international standards will be incorporated into the RGREC methodologies.

Project Name: Robstown Solar Energy Initiative
Recipient: Robstown, City of
101 E, Main Avenue
Robstown, Texas 78380

\$2,500,000 in federal funding is requested for this project. City of Robstown is interested in promoting solar energy and creating new jobs through the Robstown Utility Systems related to new concepts of renewable energy, specifically solar energy, that yield cleaner and safer jobs and promote energy efficiency. Specifically, Robstown seeks to become a leader in next-generation solar energy technology through creative industry partnerships and providing the city's infrastructure as a testbed for next-generation solar street lamps.

Project Name: Solar Power Lighting project
Recipient: South Padre Island, City of
4501 Padre Boulevard
South Padre Island, TX 78597

\$600,000 in federal cost share funding is requested for this renewable energy project. The City's master lighting conversion plan includes solar powered lights with zero cut-off fixtures, lighting ordinance to address lighting throughout the Island and the impact on current ordinances, and the provision of light's ambience and non intrusive. The new lighting system will provide the necessary illumination along all of the side streets throughout the City to enhance visibility and safety while reducing the City's carbon footprint. In addition, the new lighting system will not have any adverse affects on the local electrical distribution, loading, power factor, voltage levels, transformers, structural integrity, protection device coordination, or the function of any base electrical equipment. While the City is capable of making small-scale efficiency improvements, the City does not have the financial resources to make major investments in key projects. The City believes that by serving as a public demonstration of a variety of energy efficiency solutions, we can serve as an example to our constituents and our neighbors and become a catalyst for the further implementation of green solutions.

Project Name: South Padre Desalination Plant
Recipient: Laguna Madre Water District
105 Port Road
Port Isabel, TX 78578

\$26,306,000 in federal cost share funding is requested for this project. Desalination of sea water has the potential to solve the Laguna Madre Water District's service area long-term drought water storage problems. The only water available similar to other cities is the storage in Amistad and Falcon Reservoir associated with raw water rights. If desalination of sea water is considered as an opportunity to meet future demand, then reliance on this reservoir-based storage system would be diminished, and both the quantity and quality of their supplies would potentially be assured. The Padre Island Desalination project is a valuable use of taxpayer funds for the reason that it presents an attractive option for residents of the Laguna Madre area because the technology needed is becoming reliable and cost-competitive. In addition, this project will be able to partially supply current demands on the system that is independent of the Rio Grande supplies.

Project Name: Tule Lake Lift Bridge Foundation Removal

Recipient: Port of Corpus Christi
P. O. Box 1541
Corpus Christi, TX 78403

\$6,000,000 in federal cost share funding is requested for this project. The removal of Tule Lake Lift Bridge structures and foundations will remove a potential ship hazard adjacent to the existing Federal channel and allow the ship channel to be widened and suitable to accommodate the ships that transit the main channel. It will provide increased navigational safety and environmental safeguards, while increasing efficiency of cargo movements for the region and the Port.

Project Name: Water System Upgrade
Recipient: Laguna Madre Water District
105 Port Road
Port Isabel, TX 78578

\$11,562,850 in federal cost share funding is requested for this project. The entire filtration system should be completely rehabilitated at Water Treatment Plant No.2. The existing filtration system was identified in the Asset Management process to be in high risk due to aging infrastructure and frequent problems with the mechanical operation of the system. Because of that, the LMWD is considering replacing the existing dual-media (sand and anthracite) filters at the plant with microfiltration (a type of membrane filtration). Compliance with water quality requirements in the water system was the primary reason to consider microfiltration technology rather than expanding existing conventional processes. Factors favoring microfiltration includes:

- Reduction in the use of coagulants resulting in reduced chemical consumption
- Ability to increase plant capacity in small increments due to the modular nature of microfiltration
- Lower space requirements
- Producing consistent and high quality treated water (finished water is of higher quality than the Texas Commission on Environmental Quality requires)
- More cost-effective than other alternatives

The LMWD is currently conducting a pilot study in which specific operational parameters of the proposed system will be evaluated. This step is a requirement of the TCEQ and will allow for the most cost-effective operation of the system. The use of taxpayer funds for this project will ultimately reduce in a production facility that is state-of-the-art, produces exceptional water quality, and, due to the operational nature of the proposed system, will result in a peace of mind that water will be delivered to end users for years to come.